

ABSTRACT

As crop materials are severed from the field, they pass through two successive pairs of counter-rotating conditioning rolls before being returned to the ground. The front rolls are preferably ribbed, metal rolls wherein the ribs of one roll are intermeshed with those of the other roll so as to crimp the stems of the crop materials as they pass between the rolls. The hard metal ribs also aggressively feed the materials rearwardly into the second set of rolls, which are preferably compressive surface rolls made of rubber or the like and provided with wide, intermeshed bars about their periphery. The tension mechanism for the rolls includes single-acting hydraulic cylinders that squeeze the rolls together to the extent permitted by adjustable stop structure used to set gaps between the rolls. In typical operations, the gap between the rear rolls is set to be considerably smaller than the gap between the front rolls. Great flexibility in the degree of conditioning experienced by the crop materials is achieved by the nature of the rolls and the ease with which roll pressure and spacing can be adjusted.